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CENTRAL INTELLIGENCE AGENCY

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COUNTRY Poland

REPORT

SUBJECT **Plastics Materials Research Institute**
in Warsaw

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a report on the **Plastics Materials**
Research Institute in Warsaw containing the following:

- (1). Certain background information on the institute.
- (2). Breakdown of the organization of the institute.
- (3). General description of certain phases of work carried on at the institute.
- (4). General information on employees and a list of certain officials.

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(Note: Washington distribution indicated by "X"; Field distribution by "#".)

1. The Plastics Institute (Instytut Tworzyw Sztucznych) is located in Warsaw, at No. 8 Lacqnosci Street. It is housed in one building. The administration of the Institute is located elsewhere, in the building which houses the administrations of all the institutes which are subordinate to the Ministry of Chemicals.
2. In 1950 this Institute was organized, from the Institute of Industrial Chemistry which, between 1945 and 1950, served the needs of the Ministry of Industry and Commerce. This change came about at the time of the organization of the new Ministry of Chemicals.

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3. The Ministry of Chemicals is divided into branches, one of which supervises the plastics and laquers industry. From 1950 to 1954, the Institute was directed by the Technical Department of the Ministry of Chemicals and, from 1954 to 1957, by the Central Directorate of the Plastics and Laquers Industry (Centralny Zarzad Przemyslu Mas Plastycznych i Lakierow).
4. The Institute is headed by a Director-General and a Director of Scientific Affairs. The former supervises the administration and personnel and the latter, the various departments. Each department is headed by a department head and includes several laboratories which work on various phases of the departments' activities. These departments are:
 - a. the polymerization department,
 - b. the condensation department,
 - c. the converting department,
 - d. the workshops,
 - e. the administration.
5. The polymerization department includes laboratories which deal with polyvinyl acetate, polyvinyl alcohol, polyvinyl acetals, epoxides (?) polyesters, etc.
6. The condensation department consists of the phenolformaldehyde and aminoplastics laboratories.

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7. The converting department engages in the pressing of thermo-hardening (thermo-settings ?) by extrusion and injection.
8. The workshops serve all the departments and are heavily dependent on the equipment of the general workshops which service all the institutes of the chemical industry.
9. Besides the above mentioned departments, the Institute also has testing laboratories. (See paragraph 17).
10. The Institute is equipped with the usual equipment typical of the plastics industry. A large part of it is equipment acquired in the United States through UNRRA by Prof. Swiderek. The expansion and development plans call for an annual grant for purchasing equipment mainly from Czechoslovakia, the USSR and East Germany. The Institute possesses three presses, one for moulding by extrusion and two, by injection.
11. The Institute's personnel numbers about 200, of whom approximately 50 are chemical engineers (graduates of Polish universities), three Docents and three Ph.D's in chemistry. The average age of the professional staff members is around thirty. They are paid according to the general scale of wages in the chemical industry, i.e. from 1,000 to 3,500 zloty per month.
12. Each department works on projects of its own. These projects are set out in the annual plan and are decided upon by the

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Technical Department of the Ministry, by the Central Directorate or by the members of the department according to their own particular interests. These projects are of an applied rather than of a pure scientific nature.

13. In the line of condensation reactions, a number of phenols were developed for moulding powders, as well as resins for laquers, resins for acid-resistant containers for the chemical and other industries, synthetic glues for the woodworking industry and paper and textile impregnates for construction work and the electrical industry. The work with amino-resins included: urea-formaldehyde and melamine-formaldehyde resins as moulding powders for the electrical and household-wares industries, resins for the textile and paper industries and urea-formaldehyde as a corebinder for foundries. A number of urea-formaldehyde and melamine-formaldehyde resins were developed for the laquer industry.
14. Though epoxy (?) and polyester resins are condensation products, they are developed within the framework of the polymerization department. In the field of thermoplastics development included a number of resins such as methylmethacrylate, polyvinyl chloride, polyvinyl acetate and polyvinyl alcohol and a number of co-polymers, mainly of the chloride and acetate type. Of the polyvinyl acetals, polyvinyl formal (?) and polyvinyl butyral¹ were developed.

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15. Much work was done in determining the pressing conditions for the thermo-hardening (thermo-setting ?) resins. In particular, the role of flow for attaining various wall thicknesses and the role of the inherent water content were established. Most of the work done was published in the Przemysl Chemiczny" or the East German Kunststoffe. Some work on synthetic glues for the automotive industry, [redacted] was done. (Note: the thermoplastics field was not so well developed and much less was published on the work done in it. This is perhaps due to the overlapping of the work of the Institute with the work of both the Institute of Fiber Research and the Institute of Organic Synthesis which were engaged in work of a similar nature, namely, the use of thermoplastics as raw material and its conversion into fibres and mouldable materials. It is likely that the other institutes mentioned were more successful in thermoplastics research and production.)

16. At this Institute little original work was done. What little was done was in the establishment of the proper working conditions for the indigenous Polish raw materials such as phenols, cresols and xylenols of not-too-high a purity.

17. The testing laboratories test mainly the physical, mechanical and, partly, the chemical properties of the materials made

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within the Institute and also of materials from other institutes and from the relevant branches of other industries, particularly the electrical, automotive, textile, paper and wood industries.

No papers were published by the testing laboratories.

18. From 1955 - 1960 the plans for the development of the plastics industry were rather ambitious and called for the enlarging of the Institute. Plans were drawn up for additional buildings, one of which was to be a pilot plant for future development projects. A considerable increase in the personnel was foreseen and facilities were to be created for enabling more of the younger staff members to prepare their doctorate theses. The importing of equipment, particularly for the further development of epoxy (?) and polyester resins, was to be stepped up.
19. The Institute's main industrial consumers are the factories of the Central Directorate. Certain plants in other industries, mainly the electrical and insulation industries, avail themselves of the services and products offered by the Institute.
20. Some of the personalities at the Plastics Institute are as follows:
- a. Brojer (fnu) is a chemist and head of the polymerization department. [REDACTED] 50X1-HUM
 - b. Jan Brzezinski is a chemist and is head of the urea-formaldehyde laboratory. [REDACTED] 50X1-HUM

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- c. Dobraczynski, (fnu) is a mechanical engineer and head of the converting department. 50X1-HUM

- d. Wieslaw Holtorp is the director-general of the Institute. 50X1-HUM

- e. Jerzy Iskra is a chemist and head of the glue laboratory. 50X1-HUM

- f. Leszczynska, (fnu) is a member of the administration. 50X1-HUM

- g. Jerzy Pochwalski is a chemist and head of the condensation department. 50X1-HUM

- h. Docent Marek Weinryb is a chemist and director of Scientific Affairs at the Institute. 50X1-HUM

- i. Wacław Zielinski is a chemist and head of the PVC laboratory. 50X1-HUM

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